

Abstract

The present invention relates to the isolation of cell- or tissue-specific F-box proteins which are involved in ubiquitin-mediated protein degradation in a specific cell- or tissue-type. Accordingly, the invention provides nucleic acids and the proteins encoded by said nucleic acids which play a role in the ubiquitinylation and subsequent degradation of substrate proteins and in regulating cell proliferation, cell differentiation, and cell survival. The invention also provides methods for modulating protein degradation, cell proliferation, cell differentiation and/or cell survival by modulating protein ubiquitination; assays for identifying compounds which modulate protein degradation, cell proliferation, differentiation and/or cell survival; methods for treating disorders associated with aberrant protein degradation, cell proliferation, cell differentiation, and/or cell survival; and diagnostic and prognostic assays for determining whether a subject is at risk of developing a disorder associated with an aberrant protein degradation, cell proliferation, cell differentiation, and/or survival.

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